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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,242	09/30/2003	Un Nyoung Sa	054358-5015	5386

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EXAMINER

NGUYEN, THANH NHAN P

ART UNIT PAPER NUMBER

2871

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary	Application No. 10/673,242	Applicant(s) SA ET AL.	
	Examiner (Nancy) Thanh-Nhan P. Nguyen	Art Unit 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This communication is responsive to Amended dated 3/14/2005.
2. Claims 1-17 are presented for examination.

Claim Objections

Claim 17 is objected to because of the following informalities:

Claim 17 currently read as "the overcoat film directly contacts the color filter film, the black matrix, and the compensation film." It appears it should have read "... the polarizing film" since there is no compensation film introduced in the invention. Further, claim 17 should also have changed to "Currently Amended" rather than "Original" since the black matrix has been added.

Appropriate correction is required.

Allowable Subject Matter

The indicated allowability of claims 1-4 is withdrawn in view of the newly discovered reference(s) to Ishino U.S. Patent Application Publication No. 2002/0196382 and Jones et al U.S. Patent No. 6,417,899. Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishino U.S. Patent Application Publication No. 2002/0196382 in view of Jones et al U.S. Patent No. 6,417,899.

Referring to claims 1 and 2, Ishino discloses a liquid crystal display device comprising a transparent insulating substrate (101); a gate line (102) and a gate electrode (105) on the transparent insulating substrate; a gate insulating film (107), an active layer (108), an ohmic contact layer (109a, 109b), source (112) and drain (111) electrodes and a data line (103) on the transparent insulating substrate; a passivation film (113) formed on the transparent insulating substrate including the source and drain electrodes and the data line; a pixel electrode (117), wherein the pixel electrode includes ITO, [see figs. 4-5].

Ishino lacks disclosure of a polarizing film formed on the passivation film; and a pixel electrode formed on at least the polarizing film.

Jones et al discloses a polarizing film (53); and the pixel electrode (7) formed on at least the polarizing film, [see fig. 2], for the benefit of improving contrast ratios in the display, [see abstract]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have of a polarizing film formed on the passivation film, wherein the passivation formed on the thin film transistor; and a pixel electrode formed on at least the polarizing film for the benefit of improving contrast ratios in the display.

Claims 3-4 are met the discussion regarding claims 1-2 rejection above.

Claims 5-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paukshto et al U.S. Patent Application Publication No. 2004/0085496 in view of Park et al U.S. Patent Application Publication No. 2002/0113931, and further in view of Makino U.S. Patent No. 6,259,505.

Referring to claim 5, Paukshto et al discloses a liquid crystal display device comprising a transparent insulating substrate (603); a color filter layer (614); a polarizing film (606) formed on the color filter layer; and a common electrode (604) formed on the polarizing film, wherein the polarizing film is parallel to the transparent insulating substrate.

Paukshto et al lacks disclosure of a black matrix formed on the transparent insulating substrate; and color filter formed on upper surface of the black matrix.

Park et al discloses a black matrix (21) formed on the transparent insulating substrate (20); and color filter (22) formed on upper surface of the black matrix, [see fig. 1a], for the benefit of preventing light leakage, [see par. 0033]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have a black matrix formed on the transparent insulating substrate; and color filter formed on upper surface of the black matrix for the benefit of preventing light leakage.

Referring to claim 6, Paukshto et al lacks disclosure of an overcoat film formed between the color filter layer and the polarizing film.

Makino discloses an overcoat film (14) formed on the color filter (11R, 11G, 11B), [see fig. 1], for the benefit of flattening the color filter surface, [see col. 1, lines 31-34]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have an overcoat film formed between the color filter layer and the polarizing film for the benefit of flattening the color filter surface.

Referring to claim 7, Paukshto discloses the common electrode (604) includes ITO, [see par. 0105].

Claim 8 is met the discussion regarding claim 5 rejection above.

Claims 9 and 11 is met the discussion regarding claim 6 rejection above.

Claim 10 is met the discussion regarding claim 7 rejection above.

Claims 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paukshto et al in view of Jones et al U.S. Patent No. 6,417,899.

Referring to claim 12, Paukshto et al discloses a liquid crystal display device, comprising: a thin film transistor substrate; a color filter substrate; a liquid crystal material (2404) formed between the thin film transistor substrate and the color filter substrate; a polarizing film (2405), wherein the polarizing film is parallel to the transparent insulating substrate, [see fig. 24C].

Paukshto et al lacks disclosure of a pixel electrode formed on the thin film transistor substrate and a common electrode formed on the color filter substrate, the

pixel electrode and the common pixel aligning orientation of liquid crystal molecules of the liquid crystal material; and the polarizer contacting at least one of the pixel electrode and the common electrode for transmitting light vibrating in one direction.

It was well known that using electrodes (pixel electrode and common electrode) in liquid crystal display for being applied voltage to drive the liquid crystal. And it is evidenced by Jones et al, [see fig. 2, pixel electrode 7, and common electrode 15]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have a pixel electrode formed on the thin film transistor substrate and a common electrode formed on the color filter substrate, the pixel electrode and the common pixel aligning orientation of liquid crystal molecules of the liquid crystal material.

Jones et al also discloses the internal polarizer (17) or (53) contacting the electrode(s), [see fig. 2], for the benefit of improving contrast ratios in the display, [see abstract]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have the polarizer contacting at least one of the pixel electrode and the common electrode for transmitting light vibrating in one direction for the benefit of improving contrast ratios in the display.

Referring to claim 14, Paukshto et al discloses an overcoat film (2402) formed beneath the polarizing film (2405) contacting the common electrode.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jones et al in view of Trapani et al U.S. Patent Application Publication No. 2003/0002154.

Referring to claim 13, Jones et al lacks disclosure of the polarizing film includes polyvinyl alcohol.

Trapani et al discloses the polarizing film includes polyvinyl alcohol for the benefit of preventing degradation of the polarizer in the normal working environment such as in a liquid crystal display device, [see paragraph 0007, lines 12-14]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have the polarizing film includes polyvinyl alcohol for the benefit of preventing degradation of the polarizer in the normal working environment.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Paukshto et al in view of Park et al, and further in view of Jones et al.

Referring to claim 15, Paukshto et al discloses a liquid crystal display device, comprising: a first substrate (2412); a second substrate (2403); a color filter film (2406); a liquid crystal material (2404) formed between the first and second substrates; an overcoat film (2402) on the color filter film; and a polarizing film (2405), [see fig. 24C].

Paukshto et al lacks disclosure of a black matrix on second substrate.

Park et al discloses a black matrix (21) formed on the transparent insulating substrate (20), [see fig. 1a], for the benefit of preventing light leakage, [see par. 0033]. Therefore, at the time the invention was made, it would have been obvious to a person

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of ordinary skill in the art to have a black matrix formed on the transparent insulating substrate for the benefit of preventing light leakage.

Paukshto et al further lacks disclosure of a plurality of pixel electrodes on first substrate; a common electrode on second substrate; and a polarization film formed beneath the common electrode.

It was well known that using electrodes (pixel electrode and common electrode) in liquid crystal display for being applied voltage to drive the liquid crystal. And it is evidenced by Jones et al, [see fig. 2, pixel electrode 7, and common electrode 15]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have a pixel electrode formed on the thin film transistor substrate and a common electrode formed on the color filter substrate, the pixel electrode and the common pixel aligning orientation of liquid crystal molecules of the liquid crystal material.

Jones et al also discloses the internal polarizer (17) formed beneath the common electrode (15), [see fig. 2], for the benefit of improving contrast ratios in the display, [see abstract]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have the polarizer formed beneath the common electrode for the benefit of improving contrast ratios in the display.

Referring to claim 16, Paukshto et al discloses an upper surface of the overcoat (2402) film is flat, (and directly contacts the color film (2406) and the polarizing film (2405), [see fig. 24C].

Claim 17 is met the discussion regarding claims 15-16 rejection above.

Response to Arguments

1. Applicant's arguments, see pages 8-9, filed 3/14/2005, with respect to the rejection(s) of claim(s) 6, 9, 13-17 under 35 U.S.C 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Makino U.S. Patent No. 6,259,505 for that particular limitation.
2. Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Paukshto et al U.S. Patent Application Publication No. 2004/0085496 discloses a liquid crystal display device comprising inner polarizer(s), wherein the inner polarizer is parallel to the transparent insulating substrate.

Park et al U.S. Patent Application Publication No. 2002/0113931 discloses a liquid crystal display device comprising black matrix.

Makino U.S. Patent No. 6,259,505 discloses a liquid crystal display device comprising overcoat over color filter and black matrix.

Jones et al U.S. Patent Application Publication No. 2002/0163616 discloses a liquid crystal display device comprising an inner polarizer, and electrodes to drive the liquid crystal molecules.

Trapani et al U.S. Patent Application Publication No. 2003/0002154 discloses a polarizing film including polyvinyl alcohol.

Ishino U.S. Patent Application Publication No. 2002/0196382 discloses the thin film transistor active matrix in details.

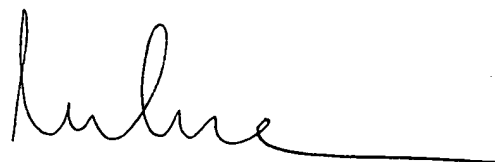
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to (Nancy) Thanh-Nhan P. Nguyen whose telephone number is 571-272-1673. The examiner can normally be reached on M-F/9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

May 31, 2005



T. NGUYEN
PRIMARY EXAMINER